

Application No. 09/517,364
Amendment dated January 13, 2003
Reply to Office Action of October 22, 2003

REMARKS

Claims 1-24 are pending in the application after this amendment. Claims 1, 2, and 7 have been amended and claims 21-24 have been added in this response. The amendment of pending claims and/or the addition of new claims is not to be considered in any way an indication of applicant's position on the merits of the previously pending claims. In the following sections of the Amendment the rejections set forth by the Examiner in the October 22, 2003, Office Action are addressed. These rejections are respectfully traversed, and detailed arguments are set forth below. Reconsideration of the claims is requested.

The Examiner rejected claims 1-20 under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,587,800 to Miyazaki (the "Miyazaki reference") or under 35 USC §103 as being unpatentable over the Miyazaki reference (stating that it would have been obvious to one skilled in the art and that one skilled in the art would have been motivated to modify the Miyazaki reference). Applicant respectfully traverses these rejections.

The Miyazaki reference is directed to a fast-output image processing method and apparatus that employ an outline font. An outline font is one in which the outline of each character is defined by a mathematical formula, making the font scalable to any size. Main features of the outline font include easiness of character processing and fineness of the generated character pattern. However, there is a drawback that the time required to generate a character pattern employing the outline font is longer than that taken in a method employing a dotted pattern font. The Miyazaki reference sets forth a page printer that receives outline data from a host computer and stores the data received in a printer's RAM before printing output. It is significant that before any of the steps shown in FIG. 4 are taken, all relevant data is transferred from the host computer to the Miyazaki printer's page buffer memory. At column 4, lines 9-11, Miyazaki specifically sets forth that "The processing of the flowcharts of FIGS. 4 to 6 start when printing data for one page is received and stored in the page buffer memory 104." All the steps performed in FIGS. 4 to 6, therefore, must be performed in the Miyazaki

printer. Upon mapping of the input code data, the Miyazaki device then examines whether the necessary pattern is stored in a cache memory or not, and if it is not stored, registers the pattern. As for form data, the Miyazaki device similarly performs pattern registration to a cache memory for form character. The pattern registration is repeated until data for one page is mapped. In other words, the Miyazaki device increases speed by not generating the pattern if it is found in memory. The Miyazaki device does not increase speed by reducing data transfer.

The present invention that increases speed by reducing data transfer as well as by reducing the need to render previously rendered. It does this by generating a uniqueness identifier in the host computer. The Miyazaki reference does not teach or suggest the claimed uniqueness identifier. The Miyazaki "character pattern" is the pattern (generated from the outline font) that is to be printed. The Miyazaki character pattern would be most equivalent to the claimed "print job," "print page," or "print image." It does not identify the material to be printed, but is the material to be printed itself. Although the Examiner does not raise the argument, applicant would like to emphasize that the outline font, which is transferred, is not unique and is not generated. Outline fonts are simply types of fonts that use an outline of each character that is defined by a mathematical formula, making the font scalable to any size. Examples of outline fonts are PostScript fonts and TrueType fonts. If the outline font itself or information about the outline font is transferred from the Miyazaki computer to the Miyazaki printer, it is simply a static definition (common to all software using a particular font) that would be assigned, not generated.

In response to the Examiner's response to applicant's "point (1)" that the "character pattern" as described by Miyazaki is not a uniqueness identifier, applicant believes that (a) the section the Examiner cites does not provide the evidence for which it is cited and that (b) the Examiner misunderstood applicant's position. First, the section that the Examiner cites (column 4, lines 44-56) to show that only "unique" data and codes are transferred does not say this at all. For example, column 4, lines 44-47 are as follows: "If YES in step S9, data for one character is read out of the form data

which has been received from the host computer 300 and stored in the RAM 101b via the reception buffer 108 in advance in step S10." This means that the form data has already been transferred from the host computer to the Miyazaki printer before S10 whether or not it has been previously rendered. Second, the Examiner responds to applicant's point by stating that Miyazaki specifically describes that character data is transferred only after a search is completed and the data is not found in storage - thus, only "unique" data and codes are transferred. Although (as discussed above) this is not what is taught by the cited section, the response also indicates that the Examiner misunderstood applicant's position which is that the "character pattern" is not equivalent to the claimed uniqueness identifier. The "character pattern" is the pattern (generated from the outline font) that is to be printed. The Miyazaki character pattern would be most equivalent to the claimed "print job," "print page," or "print image." It does not identify the material to be printed, but is the material to be printed itself. The uniqueness identifier, as described in the application, is a unique identifier that is generated or provided within the host computer (not the printer) that represents the matter to be printed, but is not the matter itself. Examples of means for generating uniqueness identifiers are algorithms associated with checksums or encryption keys.

In response to the Examiner's response to applicant's "point (2)," applicant believes that (a) the section the Examiner cites does not provide the evidence for which it is cited and that (b) the Examiner misunderstood applicant's position. First, the section that the Examiner cites (column 4, lines 44-56) to show a detailed explanation of how only data that has not previously been stored is transferred does not say this at all. For example, column 4, lines 44-47 are as follows: "If YES in step S9, data for one character is read out of the form data which has been received from the host computer 300 and stored in the RAM 101b via the reception buffer 108 in advance in step S10." This means that the form data has already been transferred from the host computer to the Miyazaki printer before S10. Second, applicant believes that the Examiner misunderstood applicant's position that the Miyazaki reference specifically discloses generating the "character pattern" in the printer whereas the invention as claimed

Application No. 09/517,364

Amendment dated January 13, 2003

Reply to Office Action of October 22, 2003

specifically recites that the uniqueness identifiers are generated in a host computer. Applicant believes that the Examiner's confusion on this issue has to do with data transferred from the host computer to the Miyazaki printer v. character patterns which are generated in the Miyazaki printer from the outline data. The outline font, which is transferred, is not unique and is not generated. Outline fonts are simply types of fonts that use an outline of each character that is defined by a mathematical formula, making the font scalable to any size. Examples of outline fonts are PostScript fonts and TrueType fonts. The character pattern, which may be generated from the outline font, is not transferred from the host computer to the Miyazaki printer.

As set forth in previous communications, generating the uniqueness identifiers in a host computer is significant for two reasons. First, it is faster to generate the uniqueness identifier in the host computer, which generally has more powerful and faster processors than peripheral devices. Second, a less expensive processor can be used in the peripheral device if it doesn't have to perform operations such as generating a uniqueness identifier. It should be noted that the claimed invention has significant advantages over that disclosed in the Miyazaki reference. For example, by generating uniqueness identifiers in a host computer, the entire print portion does not need to be transferred from the host computer to the printer if the uniqueness identifier is found in the list of uniqueness identifiers.

In response to the Examiner's response to applicant's "point (3)," applicant continues to reserve the right to present arguments that it would not have been obvious to one skilled in the art to complete a full print job in portions. The fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness. As applicant believes that claimed limitations are not taught or suggested by the Miyazaki reference, applicant has chosen not to present those arguments at this time.

Applicant will now address four groupings of claims currently pending in the application: group I consists of claims 1 and 9-11, group II consists of claims 2-6

Application No. 09/517,364

Amendment dated January 13, 2003

Reply to Office Action of October 22, 2003

and 12-17, group III consists of claims 7-8 and 18-20, and group IV consists of claims 21-24.

Turning first to the Examiner's rejection of independent claim 1, the Examiner states that Miyazaki references teaches the step of "executing a request to print at least a portion of said printed matter" at FIG. 4 and column 4, lines 1-16. Later, however, the Examiner admits that the Miyazaki references does not explicitly teach the step of printing a portion of an entire print job. The Examiner then states that Miyazaki teaches "generating a uniqueness identifier in a host computer" at column 4, lines 23-27. This step of the Miyazaki process, however, takes place in the Miyazaki printer, not the host computer. Further, this step of the Miyazaki process teaches generating the character pattern, which is the matter to be printed, not an identifier of the matter to be printed such as the claimed uniqueness identifier (claim 1 has been amended to emphasize that the uniqueness identifier is "for identifying." Dependent claims 9-11 depend from claim 1 and are patentable for the same reasons as well as for the limitations contained therein. For exemplary purposes only, claim 11 specifically includes the step of "transferring all or part of said at least a portion of said printed matter from said host computer to said printer if said uniqueness identifier is not found in said list of uniqueness identifiers." As the Miyazaki process teaches transferring the outline data prior to any comparison being made, it clearly does not teach this limitation. Applicant respectfully submits that claims 1 and 9-11 are patentable over the Miyazaki reference.

Turning next to the Examiner's rejection of independent claim 2, the Examiner states that it is rejected on the same basis as claim 1. Applicant incorporates same rebuttal arguments as were presented for claim 1 herein. Dependent claims 3-6 and 12-17 depend from claim 2 and are patentable for the same reasons as well as for the limitations contained therein. For exemplary purposes only, claim 14 specifically includes the step of "transferring all or part of said "print portion" from said host computer to said printer if said "print portion" uniqueness identifier is not found in said list of uniqueness identifiers." As the Miyazaki process teaches transferring the outline

Application No. 09/517,364

Amendment dated January 13, 2003

Reply to Office Action of October 22, 2003

data prior to any comparison being made, it clearly does not teach this limitation.

Applicant respectfully submits that claims 2-6 and 12-17 are patentable over the Miyazaki reference.

Turning next to the Examiner's rejection of independent claim 7, the Examiner states that this claim is rejected on the same basis as claim 6. This is confusing because claim 7 does not include an efficiency check, the primary limitation of claim 6. Applicant assumes that the Examiner meant to reject this claim on the same basis as claims 2 and 5. Applicant incorporates same rebuttal arguments as were presented for claims 1, 2, and 5 herein. Dependent claims 8 and 18-20 depend from claim 7 and are patentable for the same reasons as well as for the limitations contained therein. For exemplary purposes only, claim 20 includes steps similar to claims 11 and 14 and, therefore, applicant incorporates same rebuttal arguments as were presented for those claims herein. Applicant respectfully submits that claims 7-8 and 18-20 are patentable over the Miyazaki reference.

New claims 21-24 are based on previously pending claims. These claims are patentable for the same reasons as were discussed above, and further in light of the further limitations contained therein.

The specification has been amended to change an underlined space to a non-underlined space. No new matter has been added in these amendments. It is submitted that this amendment should not be objectionable.

Reconsideration of the claims is respectfully requested, and early notice of allowance thereof is earnestly solicited.

Application No. 09/517,364
Amendment dated January 13, 2003
Reply to Office Action of October 22, 2003

Please charge Deposit Account No. 50-2115 for any additional fees which may be required.

Respectfully submitted,



Karen Dana Oster
Reg. No. 37,621
Of Attorneys of Record
Tel: (503) 810-2560